

## Folk medicinal uses of plant roots from Meerut district, Uttar Pradesh

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The paper enumerates 39 medicinal plant species belonging to 39 genera and 28 families, which are used as folk medicine in the treatment of various ailments or diseases by the rural and common people of Meerut district.

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Indian Systems of Medicine derives many of their curative tools from plants<sup>1</sup>. Reference to plants used as drugs are often found in old literature (*Atharveda*, *Charak Samhita*, *Sushruta Samhita*, etc.). In spite of achievement of allopathic medicines the Indian Systems of Medicine still continue to provide medical cure to majority of the people on account of their cheaper cost and no side effects<sup>2</sup>. Folklore use of medicinal plants from Trinidad; Gwalior forest circle, Madhya Pradesh; Chittor district, Andhra Pradesh; Dehradun; Amritsar; *Yanandis* of *Sathyavedu Mandal*; Chittor district, Andhra Pradesh; Barnawa in Baghpat district Uttar Pradesh; and Baghpat district of Uttar Pradesh have been reported<sup>3-12</sup>.

### Methodology

The Meerut District situated in the Upper Ganga–Yamuna doab lies between latitude 28° 60 and 29° 18 N and longitude 77° 7 and 78° 14 E. It is bounded in the North by Muzaffarnagar, in the East by Bijnor, in the South by Ghaziabad and in the West by Baghpat district, respectively (Fig. 1). Meerut district comprises of 12 blocks of 3 Tehsils. The survey of folk medicinal plants was conducted for two consecutive years in villages of 12 Blocks in Meerut district. The study involved field work and interviews, folk medicinal information collected from the native informants (*Vaidhya* or *Hakim*) and elderly village people. Interviews were held in villages and information was recorded; medicinal plants were collected and deposited in the Department of Botany, Meerut College, Meerut. The plant species were identified with the help of available floras, Forest



Fig. 1—Map of study area

Research Institute and Botanical Survey of India, Dehradun.

### Results and discussion

In the study, roots of 39 medicinal plant species belonging to 39 genera and 28 families were found to be useful to cure various diseases or ailments. The plants are enumerated with their family, local name and uses (Table 1).

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Table 1—Ethnomedicinal uses of plants root in Meerut district

Plant name	Family	Local name	Uses
<i>Achyrenthes aspera</i> Linn.	Amaranthaceae	<i>Chirchita</i>	The root paste is applied externally at the point of scorpion sting thrice a day for two days for giving instant relief.
<i>Acorus calamus</i> Linn.	Araceae	<i>Bach</i>	Rhizome paste is given in fever to children thrice daily for 2-3 days.
<i>Aerva lanata</i> (Linn.) Juss.	Amaranthaceae	<i>Gedua ki chal</i>	The root paste is rubbed on the forehead in headache for 3-4 times a day till relief.
<i>Albizzia lebeck</i> Benth.	Mimosaceae	<i>Siras</i>	Dilute root paste is given orally repeatedly till the patient regains consciousness in case of snakebite; paste is also applied externally on the bite point.
<i>Argemone mexicana</i> Linn.	Papaveraceae	<i>Peelikateli</i>	Root is given for expelling tapeworm.
<i>Aristolochia bracteolata</i> Lamk.	Aristolochiaceae	<i>Kiromar</i>	Dried roots are given to increase uterine contraction during labour. Root is also given thrice a day for expelling round worms.
<i>Asparagus racemosus</i> Willd.	Liliaceae	<i>Satawar</i>	Root powder with cold water is given for biliousness; also given with honey; used as tonic.
<i>Bauhinia variegata</i> Linn.	Caesalpinaceae	<i>Kachnar</i>	Root decoction is administered for reducing corpulence.
<i>Bombax ceiba</i> Linn.	Bombaceae	<i>Samel</i>	For the treatment of sexual debility, root powder is given with milk for 7 days in the morning. Treatment is repeated twice every alternate month.
<i>Cissampelos pareira</i> Linn.	Menispermaceae	<i>Padh, Jaljamini</i>	Root paste is applied locally in skin diseases. Root paste mixed with black pepper ( <i>Kali mirch</i> ) powder is given thrice a day for 5 days for the treatment of malaria.
<i>Citrullus colocynthis</i> Schrad.	Cucurbitaceae	<i>Indrayan</i>	For internal inflammations, root powder mixed with castor oil is given for 3 days.
<i>Clitoria ternatea</i> Linn.	Papilionaceae	<i>Gokarni</i>	Root juice is given in chronic bronchitis to help expectoration.
<i>Curcuma domestica</i> Val.	Zingiberaceae	<i>Haldi</i>	For cold, milk boiled with turmeric and sugar is given. For catarrhal cough, fresh rhizome and <i>Dhania</i> ( <i>Coriandrum sativum</i> ) decoction is given thrice a day.
<i>Cynodon dactylon</i> (Linn.) Pers.	Gramineae	<i>Doob ghas</i>	Paste prepared from equal quantities of fresh <i>Doob</i> roots and <i>Kans</i> ( <i>Saccharum spontaneum</i> ) is given with cow milk and sugar early in the morning for one month to cure leucorrhoea.
<i>Cyperus rotundus</i> Linn.	Cyperaceae	<i>Motha</i>	Scraped roots with ginger and honey are given in gastric & intestinal disorders. For the treatment of malaria, decoction of equal quantities of moth rhizome, <i>Gloe</i> ( <i>Tinospora cordifolia</i> ) stem pieces and dried ginger is given thrice daily for 4-6 days.
<i>Desmostachya bipinnata</i> Stapf.	Gramineae	<i>Dhab</i>	The root infusion is usually given in jaundice and urinary troubles twice daily till cure.
<i>Ficus religiosa</i> Linn.	Moraceae	<i>Pipal</i>	Adventitious root of <i>pipal</i> mixed with sugar is given with fresh water in case of chicken pox once a daily for 7-8 days continuously.
<i>Gloriosa superba</i> Linn. (Linn.)	Liliaceae	<i>Kalihari</i>	Decoction of <i>Kalihari</i> root stock in sesame oil is filtered and applied twice a day followed by massage on joints having pain continued for one month.
<i>Grewia asiatica</i> Linn.	Tiliaceae	<i>Phalsa</i>	Root paste is applied on the back before going to bed in case of backache.
<i>Hemidesmus indicus</i> Linn.	Asclepiadaceae	<i>Gurmar</i>	Root paste is used in swellings twice a day. Root decoction is used thrice a day for one month as a blood purifier and in skin diseases.

Table 1—Ethnomedicinal uses of plants root in Meerut district—*Contd.*

Plant name	Family	Local name	Uses
<i>Madhuca indica</i> Gmel.	Sapotaceae	<i>Mahua</i>	Root paste in <i>Madua</i> liquor is given at bed time for 3-5 days continuously to expel intestinal worms.
<i>Mimosa pudica</i> Linn.	Mimosaceae	<i>Chui-mui</i>	Root powder with crystalline sugar for three days is given after menstruation to stop conception.
<i>Mirabilis jalapa</i> Linn.	Nyctaginaceae	<i>Gulabans</i>	Root poultice is applied over carbuncles, contusions and wounds.
<i>Momordica charantia</i> Linn.	Cucurbitaceae	<i>Karela</i>	Root paste is applied over piles.
<i>Morus alba</i> Linn.	Moraceae	<i>Toot</i>	Tea made from root is used twice a day for 5-7 days to treat diarrhoea.
<i>Musa paradisiaca</i> Linn.	Musaceae	<i>Kela</i>	Saffron ( <i>Crocus sativus</i> ) stamens mixed with banana roots is given once in the morning to cure even most complicated case of typhoid.
<i>Nerium indicum</i> Mill.	Apocynaceae	<i>Kaner</i>	<i>Kaner</i> (white flowers) roots ground and fried in <i>ghee</i> is applied externally on the ear of patient to cure inflammation.
<i>Ocimum sanctum</i> Linn.	Lamiaceae	<i>Tulsi</i>	Root decoction is given in malarial fevers; fresh root paste is applied to bites of insects and leeches.
<i>Plumbago zeylanica</i> Linn.	Plumbaginaceae	<i>Chitra</i>	<i>Chitra</i> roots are crushed and boiled in mustard oil is filtered and kept in a bottle. It is applied (3-4 drops) in the ear for pain, bleeding and itching twice a day.
<i>Raphanus sativus</i> Linn.	Cruciferae	<i>Muli</i>	Fresh root juice is given in 1-2 gm doses in urinary troubles and syphilis.
<i>Rauwolfia serpentine</i> Benth. (Ex.) Kurz.	Apocynaceae	<i>Sarpgandha</i>	In case of mental depression, root powder is given twice a day for 2 days.
<i>Sida cordifolia</i> Linn.	Malvaceae	<i>Kharaiti</i>	Root extract is given once a day for 3 days and repeated twice every week in case of constipation.
<i>Solanum virginianum</i> Linn.	Solanaceae	<i>Berkateli</i>	Fresh root extract mixed with equal quantity of lemon juice is applied daily for one month as a preventive measure against cataract.
<i>Tephrosia purpurea</i> (Linn.) Pers.	Papilionaceae	<i>Jungli-mathar</i>	In fever and vomiting, root paste made with water and ginger is given with honey thrice a day for 3-4 days.
<i>Tianthema portulacastrum</i> Linn.	Aizoaceae	<i>Santh</i>	In case of ascites, root and black pepper paste is given twice daily for 8 days. During the treatment, no salt should be used.
<i>Urena lobata</i> Linn.	Malvaceae	<i>Vilayti san</i>	Root decoction is used as a remedy in severe windy colic.
<i>Verbena officinalis</i> Linn.	Verbenaceae	<i>Peelagulabiphool</i>	Root paste is used as an antidote to snakebite.
<i>Withania somnifera</i> (Linn.) Dunal.	Solanaceae	<i>Aswagandha</i>	Root powder is given with goat milk for about 2 months to cure arthritis especially of early stage. During the treatment, use of rice is avoided.
<i>Zingiber officinalis</i> Rosc.	Zingiberaceae	<i>Adrak</i>	Ginger tea is usually given in colds and influenza. Ginger fresh rhizome juice with honey is a domestic remedy for coughs and asthma. In case of common fever during pregnancy, dried rhizome is pounded and given orally with goat's milk twice daily for 4-5 days.

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